Budget Impact Analysis of Emicizumab in Hemophilia A Pediatric Patients from Payer Perspective in Egypt

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INTRODUCTION

Hemophilia A (HA) is a rare congenital disorder caused by an inherited deficiency in blood clotting factor VIII, predominantly affecting males. Patients with HA face increased risks of bleeding following surgery or trauma, and spontaneous bleeding can occur. Approximately 30% of HA patients develop neutralizing alloantibodies (inhibitors) against Factor VIII, leading to complications and significantly increasing costs.

OBJECTIVE

Our main objective is to assess the budgetary impact of treating the Hemophilia pediatric population using Emicizumab in the Egyptian healthcare system over a 5-year time horizon.

METHOD

A static budget impact model from the payer perspective evaluated Emicizumab use in 240 pediatric Hemophilia A patients with inhibitors, compared to traditional therapies such as Factor VIII replacement, APCC, rFVIIa, and ITI.

Patient Population: 100% of pediatric patients treated with Emicizumab.

Cost Data: Direct medical costs from Egypt's unified procurement authority, including drug acquisition, follow-ups, physician visits, and hospitalizations for bleeding events.

Analysis: One-way sensitivity analyses were conducted to test the model's robustness.

BIM Market Share Scenario

Hemlibra

100%

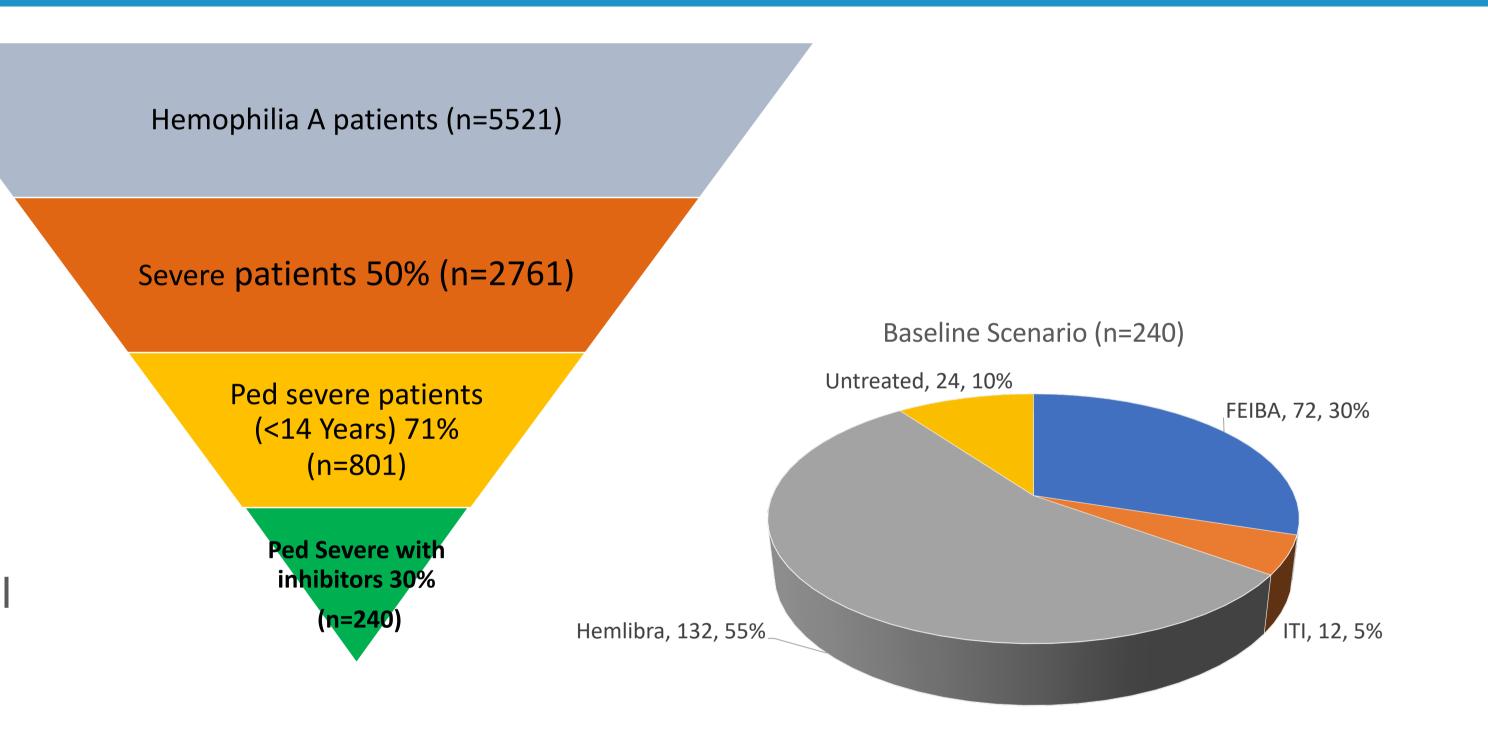
RESULTS

Significant cost savings were associated with Emicizumab over 5 years. The annual total costs for the current scenario were estimated to range between \$554,017,231 to \$2,770,086,156 from year 1 to year 5.

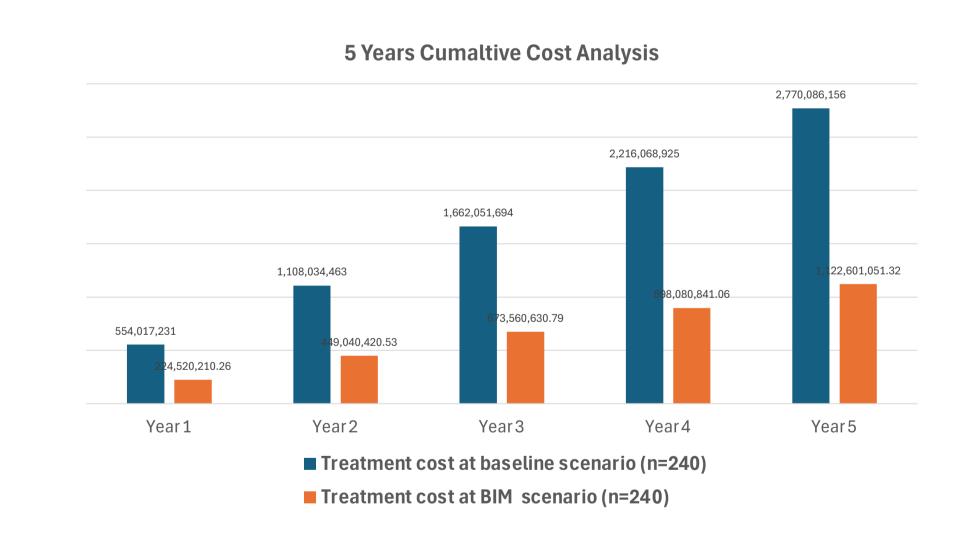
While for the new scenario, the annual total costs were estimated to range between \$224,520,210 to \$1,122,601,051 from year 1 to year 5.

The incremental cost reduction was estimated at 59% annually compared to traditional therapies.

The model is most sensitive to changes in the treatment cost parameters, particularly the baseline cost and BIM scenario cost, as variations in these values significantly impact the incremental cost savings.



	Treatment cost at baseline scenario	at BIM scenario		Incremental cost
year	(n=240)	(n=240)	Incremental cost	%
Year 1	554,017,231	224,520,210.26	(329,497,021.03)	-59%
Year 2	1,108,034,463	449,040,420.53	(658,994,042.06)	-59%
Year 3	1,662,051,694	673,560,630.79	(988,491,063.09)	-59%
Year 4	2,216,068,925	898,080,841.06	(1,317,988,084.12)	-59%
Year 5	2,770,086,156	1,122,601,051.32	(1,647,485,105.15)	-59%



CONCLUSIONS

The budget impact analysis demonstrates the substantial cost savings with Emicizumab for Hemophilia A pediatric patients in Egypt.

The adoption of Emicizumab significantly reduces total healthcare costs, demonstrating its economic and medical value.



REFERENCES



1-Unified purchasing price list- Egypt- last visited on April 2024.

2-WFH annual global survey 2022- Egypt data.

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